

WHAT IS CLAIMED IS:

1. A method of driving a display apparatus, the display apparatus including:

a first substrate having a first surface;

5 electron emitting elements, each configured to emit an electron beam, which are arranged on the first surface of the first substrate in a matrix form;

a second substrate having a second surface which faces the first surface with a gap therebetween;

10 an anode electrode formed at the second surface, and

a phosphor layer formed on the anode electrode, and configured to emit light rays in response to irradiation of the electron beam;

15 said display method comprising:

selecting a first combination of a first anode voltage and a first element voltage;

applying the first anode voltage to the anode electrode during a first period and applying the first 20 element voltage to the electron emitting elements selectively during the first period;

changing the first combination to a second combination of a second anode voltage and a second element voltage;

25 applying the second anode voltage to the anode electrode during a second period and applying the second element voltage to the electron emitting

elements selectively during the second period; and
changing the second combination to the first
combination after the second period.

2. A method according to claim 1, wherein each of
5 the electron emitting elements includes a element film
and first and second electrodes opposing each other and
disposed on the element film.

3. A method according to claim 1, wherein the
display apparatus further includes:

10 a plurality of scanning lines arranged parallel to
each other on the first surface of the first substrate;
a plurality of modulation lines which intersect
the scanning lines so as to be electrically insulated
therefrom and are arranged parallel to each other,
15 the electron emitting elements being provided at
intersections of the scanning lines and the modulation
lines, and the first and second electrodes being
respectively connected to the scanning line and the
modulation line.

20 4. A method according to claim 3, wherein
said display method further comprising:
generating a first scanning and modulating signal
including the first element voltage, and generating a
second scanning and modulating signal including the
25 second element voltage:

supplying the first scanning and modulating signal
to the scanning and modulation lines respectively,

during the first period; and
supplying the second scanning and modulating
signal to the scanning and modulation lines
respectively, during the second period.

5 5. A method according to claim 4, further
comprising inputting a display signal to generate the
scanning and modulation signal, wherein the first and
second combinations are so set as to provide a
substantially same luminance display condition with
10 respect to the same display signal.

6. A method according to claim 1, wherein
changing the first combination includes switching a
first power supply to a second power supply to generate
the second combination.

15 7. A method according to claim 1, wherein
changing the second combination includes switching a
second power supply to a first power supply to generate
the first combination.

20 8. A method according to claim 1, wherein the
first and second periods are determined based on the
first and second combinations respectively and are
inverse proportional to an anode current flowing
through the anode.

25 9. A method according to claim 1, wherein
changing the first combination includes gradually
changing the first anode voltage to the second anode
voltage, and the first element voltage to the second

voltage, and changing the second combination includes gradually changing the second anode voltage to the first anode voltage, and the second element voltage to the first voltage.

5 10. A method according to claim 1, wherein changing the first combination includes applying an intermediate anode voltage between the first and second anode voltages to the anode and applying an intermediate element voltage between the first and second element voltages to the electron emitting element during an third period after the first period, and changing the second combination includes applying the intermediate anode voltage between the first and second anode voltages to the anode and applying the intermediate element voltage between the first and second element voltages to the electron emitting element during the fourth period after the second period.

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11. A method according to claim 1, wherein the first and second combinations cause the electron beams to be landed on first and second positions on the phosphor layer, respectively.

20 12. A system for driving a display apparatus, comprising:

25 a first substrate having a first surface; electron emitting elements, each configured to emit an electron beam, which are arranged on the first

surface of the first substrate in a matrix form;
a second substrate having a second surface which
faces the first surface with a gap therebetween;
an anode electrode formed at the second surface,

5 and

a phosphor layer formed on the anode electrode
and configured to emit light rays in response to
irradiation of the electron beam;

10 a selecting portion configured to select a first
combination of a first anode voltage and a first
element voltage to apply the first anode voltage to the
anode electrode and apply the first element voltage to
the electron emitting elements selectively, during a
first period; and

15 a changing portion configured to change the first
combination to a second combination of a second anode
voltage and a second element voltage after the first
period to apply the second anode voltage to the anode
electrode and apply the second element voltage to the
20 electron emitting elements selectively, during a second
period, and change the second combination to the first
combination after the second period.

25 13. A system according to claim 12, wherein each
of the electron emitting elements includes a element
film and first and second electrodes opposing each
other and disposed on the element film.

14. A system according to claim 12, wherein

the display apparatus further includes:

a plurality of scanning lines arranged parallel to each other on the first surface of the first substrate;

5 a plurality of modulation lines which intersect the scanning lines so as to be electrically insulated therefrom and are arranged parallel to each other, the electron emitting elements being provided at intersections of the scanning lines and the modulation lines, and the first and second electrodes being

10 respectively connected to the scanning line and the modulation line.

15. A system according to claim 12, wherein the selecting portion includes:

15 a signal generator configured to generate a first scanning and modulating signal including the first element voltage, supply the first scanning and modulating signal to the scanning and modulation lines respectively, during a first period, generate a second scanning and modulating signal including the second element voltage and supply the second scanning and modulating signal to the scanning and modulation lines respectively, during a second period.

20 16. A method according to claim 15, further comprising an input potion configured to input a display signal to generate the scanning and modulation signal, wherein the first and second combinations are so set as to provide a substantially same luminance

display condition with respect to the same display signal.

17. A method according to claim 12, further comprising a switching portion configured to switch a first power supply to a second power supply to generate the first combination.
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18. A method according to claim 12, further comprising a switching portion configured to switch a second power supply to a first power supply to generate the first combinations.
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19. A method according to claim 12, wherein the first and second periods are determined based on the first and second combinations respectively and are inverse proportional to an anode current flowing
15 through the anode.

20. A method according to claim 12, wherein the changing portion gradually changes the first anode voltage to the second anode voltage and the first element voltage to the second voltage, and gradually changes the second anode voltage to the first anode voltage, and the second element voltage to the first voltage.
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21. A method according to claim 12, wherein the changing portion includes an applying portion configured to apply an intermediate anode voltage between the first and second anode voltages to the anode and to apply an intermediate element voltage
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between the first and second element voltages to the electron emitting element during an third period after the first period and during the fourth period after the second period, respectively.

- 5 22. A method according to claim 12, wherein the first and second combinations cause the electron beams to be landed on first and second positions on the phosphor layer, respectively.